

CLAIMS

Add
A1

1. An optical mount for supporting and positioning an optical element with regard to a beam of optical energy, said optical mount comprising:

a first plate to carry said optical element;

a second plate coupled to said first plate in spaced, opposing alignment therewith; and

5 plate positioning means extending from said second plate to contact said first plate, said plate positioning means being moveable relative to said first plate to impart a corresponding movement to said first plate and to said optical element carried thereby;

10 each of said first and second plates having at least one pair of legs that are joined to one another at a point of intersection and an open area that is located diagonally opposite said point of intersection so that the beam of optical energy can pass uninterrupted through said open area of each of said first and second plates.

2. The optical mount recited in claim 1, wherein said first plate has a C-shape.

3. The optical mount recited in claim 1, wherein said second plate has an L-shape.

4. The optical mount recited in claim 1, wherein said plate positioning means includes a plurality of actuators that are rotatable in and translatable laterally through said second plate, a first and a second of said plurality of actuators being respectively located at the ends of said at least one pair of legs which are opposite said point of intersection.

5. The optical mount recited in claim 1, wherein said optical element is located at and supported within a semi-circular optics carrying seat of said first plate so that said optical element is cradled by said at least one pair of legs of said first plate.

6. The optical mount recited in claim 5, wherein said optical element is suspended within said semi-circular optics carrying seat by means of a first contact point projecting from one end of said optics carrying seat, a second contact point projecting from the opposite end of said optics carrying seat, and a third contact point projecting from said optics carrying seat at a location between said first and second contact points.

7. The optical mount recited in claim 6, wherein said first contact point is a nylon tipped retaining screw projecting radially inward from said one end of said semi-circular optics carrying seat to engage and releasably retain said optical element thereat.

8. An optical mount for supporting and positioning an optical element with respect to a beam of optical energy, said optical mount comprising;

a first plate having top and bottom faces, said optical element to be received at said top face;

a second plate having top and bottom faces and a pair of legs that are joined to one another, the top face of said second plate being coupled in spaced, opposing alignment to the bottom face of said first plate;

plate positioning means extending from said second plate to contact the bottom face of said first plate, said plate positioning means being moveable relative to said first plate to

impart a corresponding movement to said first plate and to said optical element that is received at the top face of said first plate; and

5 adapter means to be attached to said second plate to be cradled by said pair of legs thereof, said adapter means adapted to be connected to a support surface whereby to position said first plate in horizontal alignment above the support surface so that said optical element rests upon the top face of said first plate at which to receive the beam of optical energy.

9. The optical mount recited in claim 8, wherein said first plate has a rectangular shape.

10. The optical mount recited in claim 8, wherein said second plate has an L-shape.

11. The optical mount recited in claim 8, wherein said adapted means is a disk, said optical mount further comprising fastener means by which to attach said disk to said second plate to be cradled by said pair of legs thereof.

12. The optical mount recited in claim 11, wherein said adapter disk has a hole extending axially therethrough, said adapter disk adapted to be connected to the support surface from said axially extending hole.

13. The optical mount recited in claim 8, wherein said plate positioning means includes a plurality of actuators that are rotatable in and translatable laterally through said

second plate, a first and a second of said plurality of actuators being respectively located at the ends of said pair of legs opposite the ends which are joined to one another.

14. An optical mount for supporting and positioning an optical element with respect to a beam of optical energy, said optical mount comprising:

a first plate to carry said optical element, said first plate having a series of legs that are joined end-to-end one another;

5 a second plate coupled to said first plate in spaced, opposing alignment therewith;
plate positioning means extending from said second plate to contact said first plate at at least two different points, said plate positioning means being moveable relative to said first plate to impart a corresponding movement to said first plate and to said optical element carried thereby; and

10 a mounting platform detachably connected to said first plate so as to be cradled by said series of legs thereof, said mounting platform supporting said optical element.

15. The optical mount recited in claim 14, wherein said first plate has a C-shape.

16. The optical mount recited in claim 15, wherein said mounting platform has an arcuate body to be received within and surrounded by said C-shaped first plate.

17. The optical mount recited in claim 14, wherein said mounting platform has a screw receiving cavity formed therein, said optical mount further comprising a mounting screw extending through said first plate to engage said mounting platform at said screw receiving cavity thereof to detachably connect said mounting platform to said first plate.

18. The optical mount recited in claim 14, further comprising an optics holder connected to said mounting platform, said optics holder engaging said optical element so that said optical element is attached to said first plate by way of said mounting platform.

19. The optical mount recited in claim 18, wherein said optical element engaged by said optics holder is a mirror having a face at which to receive the beam of optical energy, the face of said mirror being coplanar with each of said at least two different points at which said plate positioning means extending from said second plate contacts said first plate.

20. The optical mount recited in claim 19, further comprising a retaining screw extending through said optics holder to engage and releasably retain said mirror, the point at which said retaining screw engages said mirror being offset from the coplanar alignment of said mirror face and each of said at least two different points at which said plate positioning means contacts said first plate.

ADD
A1